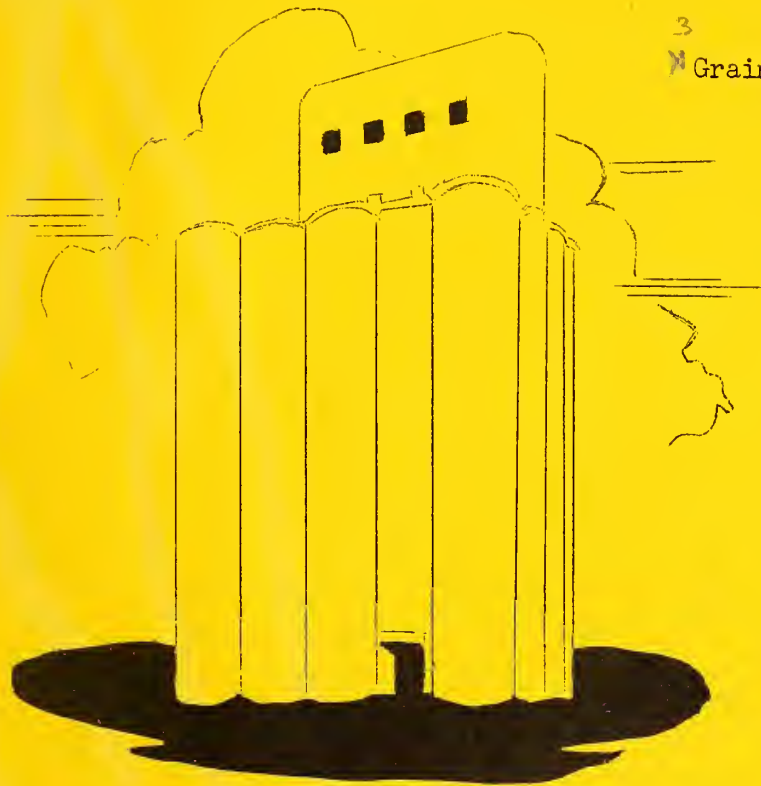


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Grain Marketing Survey
in
Arkansas ¹⁰

By
D. H. McVey

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⁷ U. S. FARMER COOPERATIVE SERVICE, ^{17a}
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FARMER COOPERATIVE SERVICE
U. S. Department of Agriculture
Washington 25, D. C.

Joseph G. Knapp Administrator

The Farmer Cooperative Service conducts research studies and service activities of assistance to farmers in connection with cooperatives engaged in marketing farm products, purchasing farm supplies, and supplying business services. The work of the Service relates to problems of management, organization, policies, merchandising, product quality, costs, efficiency, and membership.

The Service publishes the results of the studies, confers and advises with officials of farmer cooperatives; and works with educational agencies, cooperatives, and others in the dissemination of information relating to cooperative principles and practices.

FINDINGS

In answer to a request in a resolution of the Board of Directors of the Arkansas Rice Growers Cooperative Association of Stuttgart, Ark., the Farmer Cooperative Service made this survey. The association wanted to find out if it would be feasible to set up a grain marketing program.

Additional grower-owned grain storage and handling facilities are needed if the grain producers in the Delta counties of Arkansas are to realize the greatest benefit from grain production.

The Arkansas Rice Growers Cooperative Association seems to have many advantages if its members wish to enter into a cooperative grain marketing program. Some of these are:

- a. The rice territory and the heavy grain producing area coincide. Many of the rice growers also produce grain and are accustomed to the cooperative way of doing business.
- b. The association has completely modern storage and handling facilities at several locations throughout the Delta.
- c. The association has practically all the necessary management and office personnel and office equipment that would be necessary in operating a grain marketing program.
- d. Experienced people from the rice operating facilities would be available to operate any grain facilities.
- e. The long experience of the management and office personnel in the cooperative handling and marketing of rice would be invaluable in a cooperative grain marketing program.
- f. The confidence of the producers in their association, built up over many years, would be valuable in starting a grain marketing program and should help insure volume from the beginning.

g. Under these conditions and with proper allocation of costs, the cost of operating a grain marketing program would not be as great as they otherwise would be and the cost of operating the rice program would be reduced.

Major facts supporting these findings are as follows:

1. The acreage devoted to grain production (exclusive of rice) in Arkansas declined between 1940 and 1953. There has been a sharp increase since then and current acreage is back to the early 1940's level of around 2.6 million acres.
2. There has been a radical shift in the acreage devoted to the various crops. Corn acreage had declined sharply. In 1940 it comprised 30 percent of the total grain acres, in 1957 it made up less than 20 percent of the acres. The greatest increase in acreage has been in soybeans. In 1940, they accounted for only 2.5 percent of the acreage, in 1957, 53 percent. Oats acreage has been erratic. Wheat and sorghum have shown recent rapid increases but still comprise only a small amount of the total.
3. Grain production has fluctuated from year to year from 54 million bushels in 1940 to 30 million bushels in 1953. In each of the last 3 years, production has exceeded 60 million bushels. Corn has shown a decided decline while wheat, soybeans and sorghum have been increasing. These three crops accounted for 2.5 percent of the production in 1940. This had risen to more than 60 percent in 1957. Soybeans alone comprised nearly 50 percent of the total grain production in 1957.
4. The total amount and the proportion of grain sold off the farm where grown have also increased rapidly. For the 1940-44 period, an average of only 6.7 million bushels or less than 15 percent of the production were sold. The average sales for the period 1955-57 was

43.9 million bushels or nearly 60 percent of the production. A part of the increase in the proportion of grain sold can be attributed to the shift in the kind of grain grown. Practically all the soybeans and wheat are sold while much of the corn and other feed grains are fed on the farm where grown.

5. The change in the acreage, production and sales of grain for the 24 Delta counties in the State is even more striking than for the State as a whole. These counties contain less than 42 percent of the land in farms in the State but:

- a. Grain production in the State has increased by nearly 36 million bushels since 1952. The 24 Delta counties accounted for more than 83 percent of this increase.
- b. They harvest 80 percent of the grain acreage.
- c. They produce 82 percent of the grain.
- d. They market 90 percent of the grain in the State.
- e. They sell 80 percent of the grain they produce compared to less than 40 percent for the remainder of the State.

6. Production of grain in this area is likely to continue upward as better cultural practices are adopted and marketing facilities developed.

7. The proportion of grain sold will remain at a high level with some increase likely in the feed grains. The limit has about been reached for wheat and soybeans.

8. In accordance with the custom established in marketing the other cash crops of cotton and rice, grain growers will continue to market their grain as it is harvested.

9. It is estimated that there was about 46 million bushels of commercial storage facilities in the Delta in 1957. Of this, 31 million bushels were estimated to be primarily for rice which would leave about 15 million bushels for grain. This amounts to one bushel of storage for each 2.9 bushels of grain sold off the farm.

10. Only about 2.7 million bushels of this storage is cooperative or farmer controlled and the bulk of this is at cooperative oil mills for soybeans.

11. Most of the existing storage is used as working space for commercial concerns and is not available to farmers. They are unable to take advantage of the usual market rise after harvest or price support programs.

12. Rail transportation to the South is fairly adequate. East to west except from Memphis to Little Rock, it is inadequate. The lack of roads and bridges hinder truck movement, particularly in the south half of the Delta. Even so, most of the grain moves by truck.

13. Terminal facilities have been available at Memphis for a long time. Only recently, terminals have been built at Helena, Ark. and Greenville, Miss. It is rumored that another plant is to be built at Osceola, Ark.

Grain Marketing Survey in Arkansas

By

D. H. McVey
Grain Branch, Marketing Division

The purpose of this study was to survey the acreage, production, storage and marketing facilities for soybeans, wheat, oats, corn and grain sorghum in northeast Arkansas to determine the feasibility of a cooperative grain marketing program. The study has been made in compliance with a resolution of the Board of Directors of the Arkansas Rice Growers Association requesting the study on February 5, 1958.

The data on northeast Arkansas including a field survey made in March 1958, have been combined with the data for the southeastern part of the State, where a field survey was made late in the summer of 1957 for another study. Thus the data in this report cover the 24 Delta counties of the State, the same area in which the Arkansas Rice Growers Cooperative Association processes and markets its members' rice crop, (figure 1).

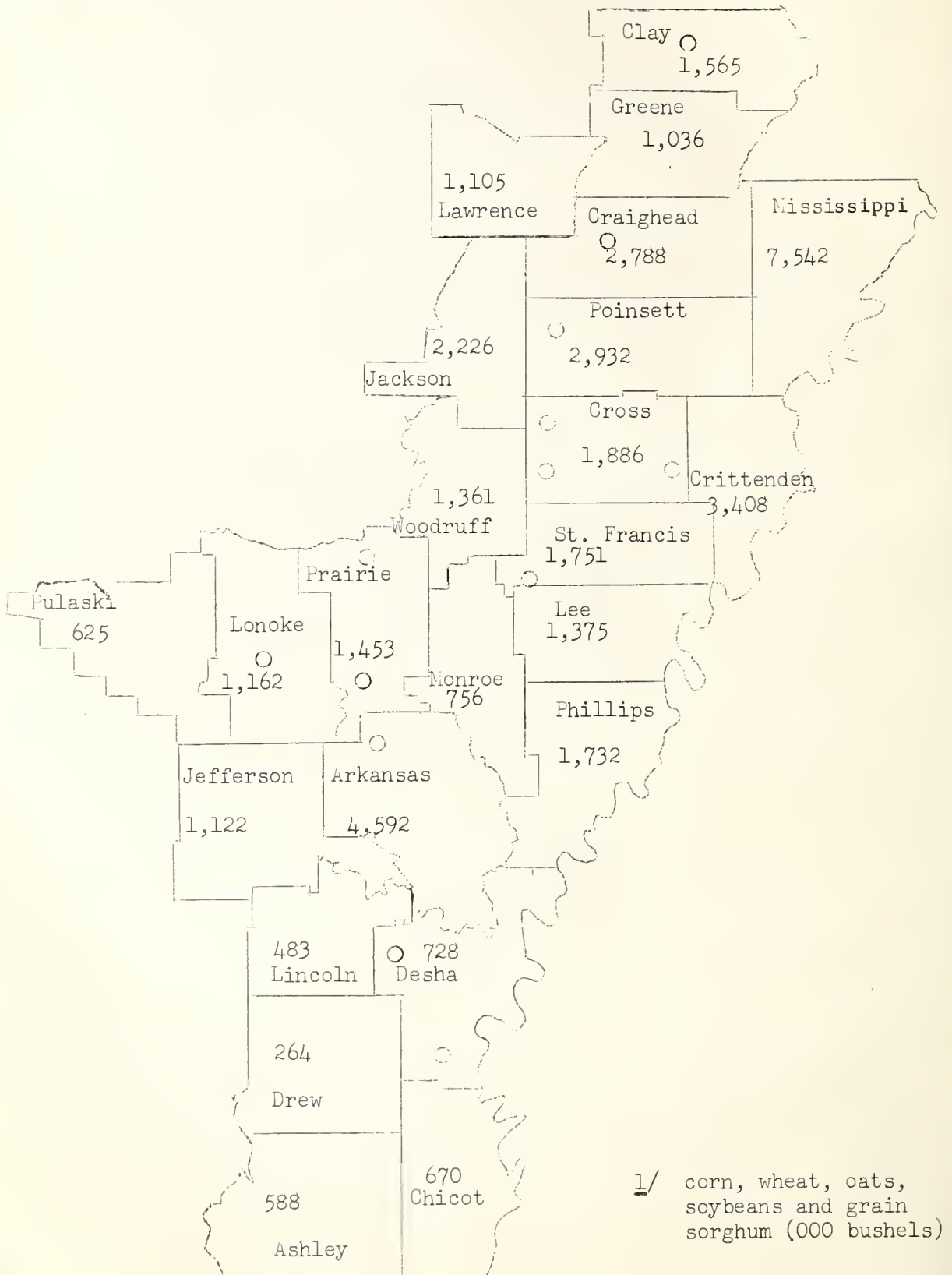
Grain Acreage, Production and Sales

The acreage, production and sale of grain in the State has changed greatly in recent years.

Acreage

Since 1940, the total acreage devoted to the production of grain (exclusive of rice) in Arkansas declined rather sharply from 2.5 million acres to 1.3 million acres in 1953. There has been a decided increase

Figure 1: Location of storage and drying facilities of the Arkansas Rice Growers Cooperative Association and estimated off-farm sale of grain in 1957 1/



since then to 2.3 million acres in 1956, with a decline to 2.0 million acres in 1957. There has also been a pronounced shift in the acreage devoted to the various grains.

A part of this recent increase in grain acreage can be attributed to the decline in cotton and rice acreage. Cotton acreage declined from 2,573,000 acres in 1940 to 1,165,000 acres in 1957. Rice acreage declined from 613,000 acres in 1954 to 337,000 acres in 1957.

Corn accounted for more than 30 percent of the total acres in 1940 but declined by more than 75 percent by 1957 when it comprised less than 20 percent of the total. The acreage of oats has varied considerably over the period with the last 3 years being much higher than previously. There was a general upward trend in wheat acreage but it never reached 100,000 acres until 1957. Soybeans have shown a phenomenal increase from 63,000 acres in 1940 to 1,503,000 acres in 1956, with a decline to 1,363,000 acres in 1957. In 1940, soybeans accounted for only 2.5 percent of the total grain acreage; this had increased to 53 percent in 1957. Grain sorghum was relatively unimportant except for the past 3 years, but doubled in 1957 (table 1 and figure 2).

Production

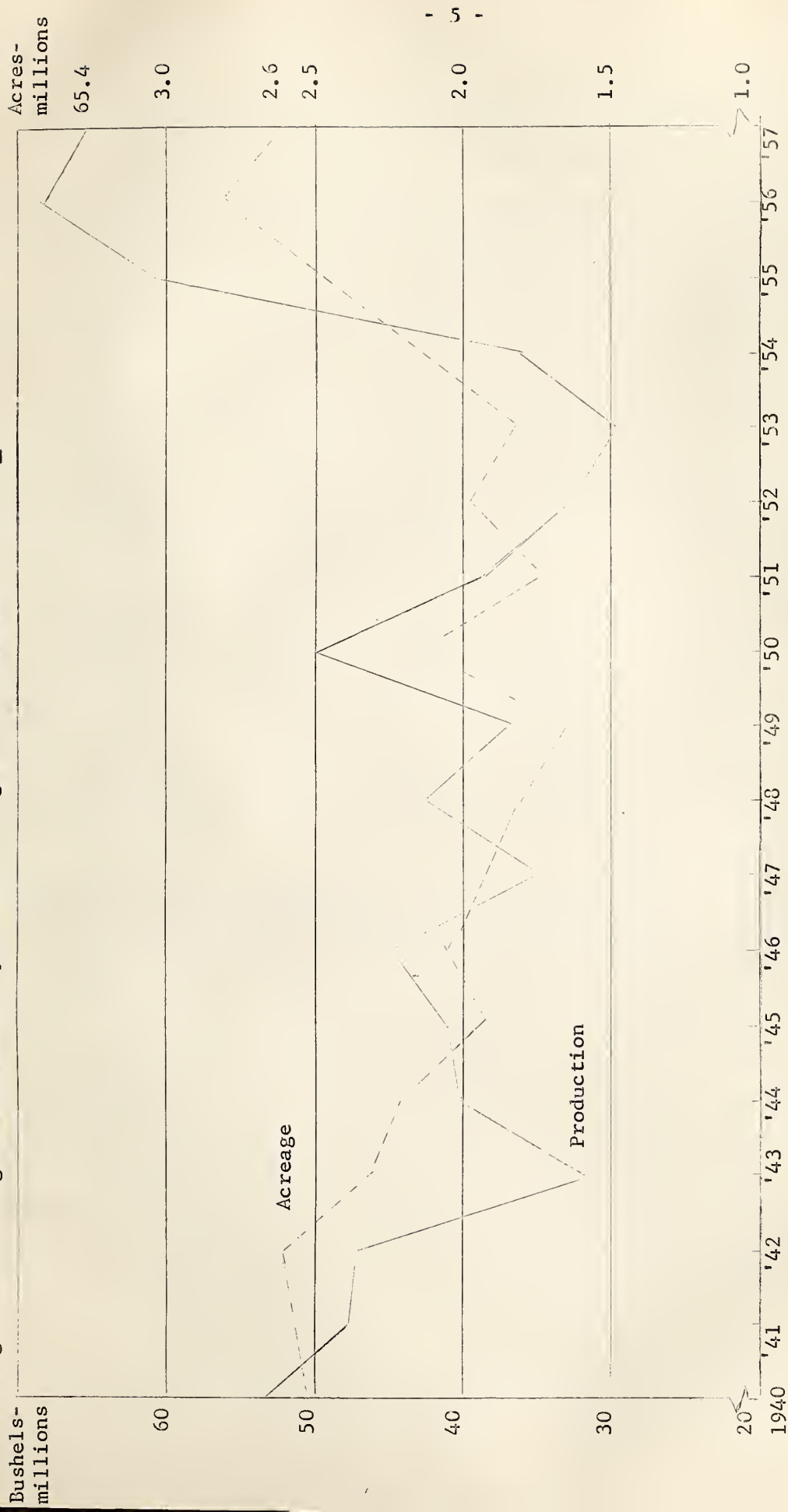
The total production of grain in Arkansas fluctuated considerably from 1940 to 1954 from a high of nearly 54 million bushels in 1940 to less than 30 million bushels in 1953. In each of the past 3 years, production has exceeded 60 million bushels. Corn production has shown a decided decline while wheat, soybeans and sorghum have been on the increase. These three grains accounted for only 2.5 percent of the total production in 1940 but more than 60 percent of the total in 1957.

Table 1.--Acreage harvested of principal grain crops in Arkansas, 1940-57

Year	Corn	Oats	Wheat	Soybeans	Sorghum	Total
<u>1,000 acres</u>						
1940	2,192	234	31	63	14	2,534
1941	2,143	253	30	116	8	2,555
1942	2,062	304	22	217	8	2,613
1943	1,784	274	17	267	5	2,347
1944	1,623	320	45	233	7	2,229
1945	1,363	304	39	209	10	1,925
1946	1,472	255	28	295	8	2,058
1947	1,325	280	24	283	10	1,922
1948	1,246	252	28	273	16	1,815
1949	1,134	192	24	300	14	1,664
1950	1,372	165	18	531	29	2,165
1951	988	112	23	607	15	1,745
1952	929	118	38	836	10	1,931
1953	715	212	86	771	24	1,808
1954	729	354	63	958	18	2,122
1955	663	460	72	1,217	68	2,480
1956	670	442	96	1,509	79	2,796
1957	516	398	163	1,333	158	2,618

Source: Agricultural Statistics, U. S. Dept. of Agric.; Agricultural Statistics for Arkansas, Arkansas Dept. of Agric., Little Rock; and Univ. of Arkansas, Fayetteville; Crop Production, Agricultural Marketing Service, U. S. Dept. of Agric.

Figure 2.--Acreage harvested and production of grain in Arkansas, 1940-57 1/



1/ Corn, oats, wheat, and soybeans for beans and grain sorghum

Soybeans alone accounted for nearly 50 percent of the total production in 1957 (table 2 and figure 3).

Yields per acre fluctuated widely between 1940 and 1957, although there has been a general upward trend. Oats yields were noticeably smaller in 1957 but soybeans and sorghum were the highest for the period (table 3).

Table 4 shows the average acreage and production of grain for specified periods beginning with 1940-44 to eliminate some of the year-to-year fluctuations. Corn acreage declined by nearly 70 percent between 1940-44 and 1955-57 while production has declined slightly less than 50 percent. On the other hand soybean acreage increased more than $7\frac{1}{2}$ times but production increased nearly $11\frac{1}{2}$ times which is an indication of the increase in yield per acre. The average yield per acre of all grains combined in 1940-44 was 10.1 bushels. For the period 1955-57, the comparable figure was 24.7 bushels--an increase of more than 30 percent.

Off-Farm Grain Sales

The trend in the amount of grain sold off the farm has been almost continuously upward since 1940 and in the last 2 years was 65 to 70 percent of production. In the period 1940-44 with an average yearly production of 44.6 million bushels, an average of only 5.7 million bushels, or less than 15 percent, were sold. For the 3-year period 1955-57, production averaged 64.9 million bushels, but the amount sold averaged 43.2 million bushels, or nearly 68 percent of production (table 5 and figure 4).

Table 2.--Production of principal grain crops in Arkansas, 1940-57

Year	Corn	Oats	Wheat	Soybeans	Sorghum	Total
1,000 bushels						
1940	46,032	6,201	341	756	232	53,562
1941	40,812	5,946	315	1,740	126	48,939
1942	37,116	7,004	242	3,255	113	48,635
1943	22,300	6,850	187	2,536	50	31,923
1944	26,780	8,332	685	3,612	100	40,009
1945	23,623	8,208	410	3,344	170	40,755
1946	30,912	7,650	392	5,458	120	44,532
1947	22,525	8,400	360	3,396	150	34,831
1948	23,658	7,812	476	5,460	238	42,694
1949	24,943	4,704	348	6,300	241	36,541
1950	32,242	4,620	252	12,492	493	50,099
1951	23,213	2,800	356	12,140	315	38,829
1952	13,935	3,835	684	14,176	170	32,800
1953	11,798	7,632	1,634	8,481	360	29,905
1954	8,019	15,222	1,701	11,017	270	36,229
1955	19,558	16,560	1,404	21,906	1,564	60,992
1956	18,090	18,564	2,736	27,162	1,738	68,290
1957	13,932	11,542	3,260	32,500	4,187	65,421

Source: Agricultural Statistics, U. S. Dept. of Agric;
Agricultural Statistics for Arkansas, Arkansas Dept. of Agric.,
Little Rock, and Univ. of Arkansas, Fayetteville;
Crop Production, Agricultural Marketing Service, U. S. Dept. of
Agric.

Figure 3.--Production of major grains in Arkansas, 1940-57

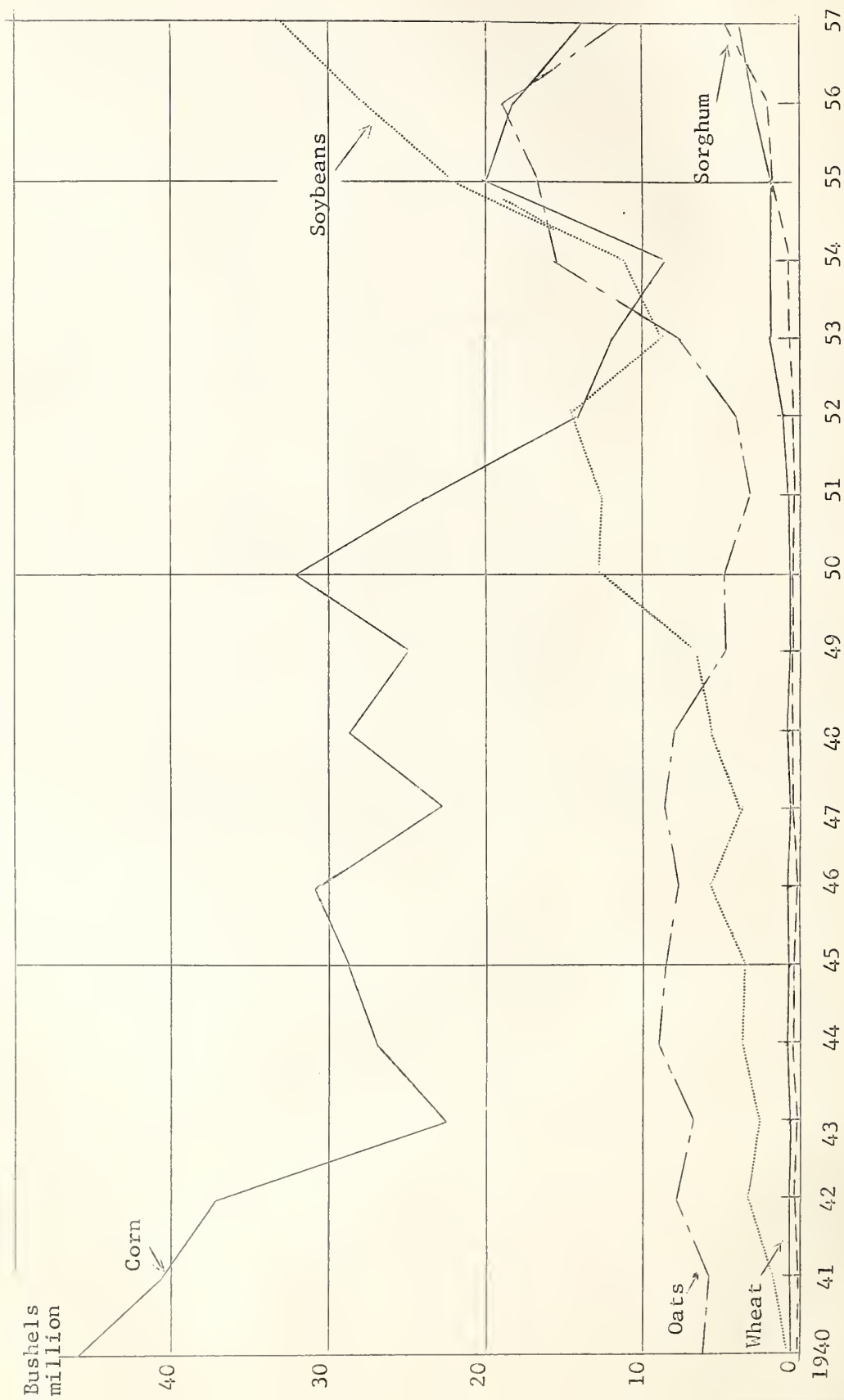


Table 3.--Yield per acre of principal grain crops in Arkansas, 1940-57

Year	Corn	Oats	Wheat	Soybeans	Sorghum
<u>Bushels</u>					
1940	21.0	26.5	11.0	12.0	17.0
1941	19.0	23.5	10.5	15.0	15.0
1942	18.0	26.0	11.0	15.0	14.8
1943	12.5	25.0	11.0	9.5	10.0
1944	16.5	27.6	14.9	15.5	14.3
1945	21.0	27.0	10.5	16.0	17.0
1946	21.0	30.0	14.0	18.5	15.0
1947	17.0	30.0	15.0	12.0	15.0
1948	23.0	31.0	17.0	20.0	18.0
1949	22.0	24.9	14.5	21.0	17.2
1950	23.5	28.0	14.0	21.5	17.0
1951	23.5	25.0	15.5	20.0	21.0
1952	15.0	32.5	18.0	16.0	17.0
1953	16.5	36.0	19.0	11.0	15.0
1954	11.0	43.0	27.0	11.5	15.0
1955	29.5	36.0	19.5	18.0	23.0
1956	27.0	42.0	23.5	18.0	22.0
1957	27.0	29.0	20.0	23.5	26.5

Source: Agricultural Statistics, U. S. Department of Agriculture.
Agricultural Statistics of Arkansas, Arkansas Dept. of Agric.,
Little Rock; Crop Production, Agricultural Marketing Service,
U. S. Dept. of Agric.

Table 4.--Average annual acreage and production of specified grain in Arkansas by specified periods, 1940-57

[illegible]

1/ Includes sorghum.

Source: Tables 1 and 2.

Table 5.--Various grains sold off farm where grown in Arkansas, 1940-57

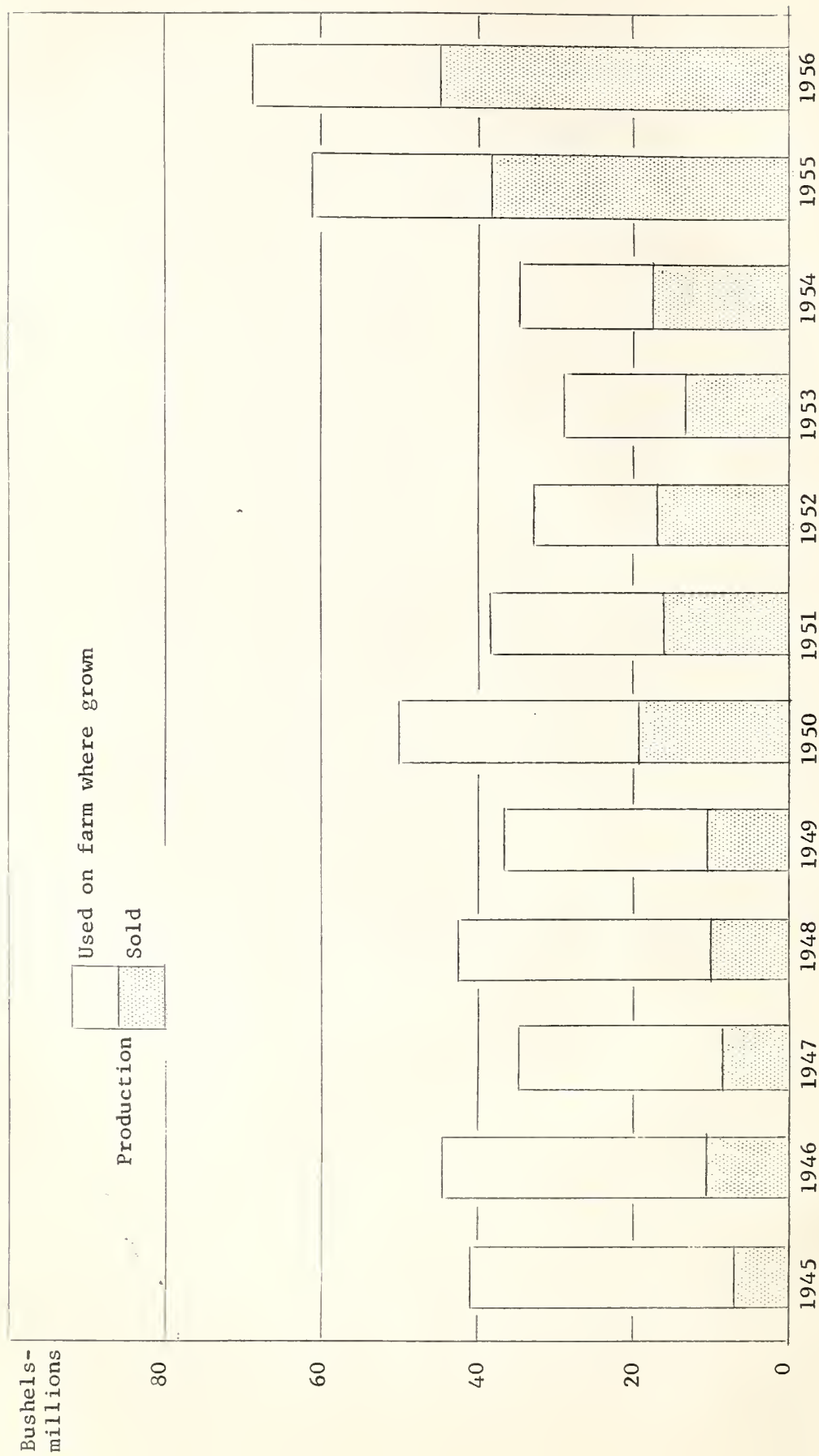
Year	Corn	Oats	Wheat	Soybeans	Sorghum	Total	Percentage of production sold
	1,000 bushels						Percent
1940	5,864	716	136	499	16	7,231	13.5
1941	4,799	714	127	1,376	7	7,023	14.4
1942	2,880	869	77	2,835	8	6,669	13.7
1943	1,073	754	22	2,210	4	4,868	15.2
1944	2,297	1,501	342	3,309	7	7,456	18.6
1945	3,034	1,313	156	3,007	11	7,571	18.6
1946	2,863	1,939	211	5,197	8	10,268	23.1
1947	2,800	2,100	216	3,229	10	8,355	24.0
1948	3,951	2,031	176	5,216	43	11,417	26.7
1949	2,662	1,882	157	5,993	51	10,745	29.4
1950	5,656	1,571	83	11,953	99	19,367	33.7
1951	3,366	1,120	101	11,505	44	16,136	41.6
1952	1,439	1,918	314	13,590	20	17,331	52.8
1953	1,516	2,671	1,272	7,971	158	13,538	45.4
1954	530	6,037	1,275	9,862	72	17,776	51.3
1955	4,158	10,764	1,142	21,147	938	38,149	62.4
1956 <u>1/</u>	4,360	11,881	2,313	26,344	1,043	45,941	67.3
1957 <u>2/</u>	3,483	7,228	2,918	31,525	2,512	47,666	72.9

1/ Preliminary.

2/ Estimated.

Source: Field and Crop Seeds, Farm Production, Farm Disposition and Value, Agricultural Marketing Service, U. S. Dept. of Agric.

Figure 4.--Production and farm disposition of grain 1/ in Arkansas, 1945-56



1/ Corn, oats, wheat, and soybeans and grain sorghum

There is wide variation in the proportion of the different grains sold off the farm where grown. A lot of the corn is still fed on the farm while most of the soybeans and wheat are sold. In the 3-year period, 1955-57, only 23 percent of the corn was sold while nearly 97 percent of the soybeans was sold. Sixty percent or more of the sorghum and oats production was sold and more than 86 percent of the wheat went to market (table 6).

Comparison of Delta Counties with Others

According to the 1955 Census of Agriculture, there were 17.9 million acres of land in farms in Arkansas with 7.5 million acres or 41.6 percent in the 24 Delta counties. With a little more than 40 percent of the land in farms, these 24 Delta counties harvested about 80 percent of the total grain acreage in 1956 and produced an equal proportion of the grain crop. In 1957, they produced an estimated 82 percent of that crop.

The proportion of the crop sold off the farm was also higher in these counties--72 percent as compared to 37 percent for the remainder of the State, according to the 1954 Census of Agriculture (table 7). In other words, around 90 percent of the grain that leaves the farm in Arkansas is from the Delta counties.

Between 1952 and 1956, grain production more than doubled for the State as a whole. In these 24 Delta counties, it increased nearly 2.2 times as compared to an 81 percent increase for the rest of the State. Seventeen of the 24 counties more than doubled their production and only one county failed to increase by 50 percent or more (table 8).

Table 6.--Average annual production and sale of grain in Arkansas, by kinds, for crop years 1955-57

Kind of grain	Average of three crops 1955-57		Percentage of production sold
	Production	Sales	
	<u>1,000 bushels</u>		<u>Percent</u>
Corn	17,193	4,000	23.3
Oats	15,555	9,958	64.0
Wheat	2,467	2,124	86.1
Soybeans	27,189	26,339	96.9
Sorghum	<u>2,497</u>	<u>1,498</u>	<u>59.9</u>
Total	64,901	43,919	67.7

Source: Calculated from tables 2 and 5.

Table 7.--Comparison between 24 Delta counties in Arkansas 1/ and remaining 51 counties in the State of acreage harvested and production in 1956, production in 1957, and sales in 1954, by kinds of grain

Kind of grain and area	1956				1957		1954
	Acreage harvested		Production		Production		Percentage of production sold
	:Percentage:		:Percentage:		:Percentage:		
	Total	of state	Total	Percentage	Total	Percentage	
	: total	:	:	:	:	:	:
	1,000 acres	Percent	1,000 bu.	Percent	1,000 bu.	Percent	Percent
<u>Corn</u>							
Delta	400	60	11,389	63	8,421	60	30
Others	<u>270</u>	<u>40</u>	<u>6,701</u>	<u>37</u>	<u>5,511</u>	<u>40</u>	<u>10</u>
Total	670	100	18,090	100	13,932	100	24
<u>Oats</u>							
Delta	356	81	13,877	75	8,654	75	67
Others	<u>86</u>	<u>19</u>	<u>4,687</u>	<u>25</u>	<u>2,838</u>	<u>25</u>	<u>35</u>
Total	442	100	18,564	100	11,542	100	59
<u>Wheat</u>							
Delta	61	63	1,840	67	2,664	82	80
Others	<u>35</u>	<u>37</u>	<u>896</u>	<u>33</u>	<u>596</u>	<u>18</u>	<u>70</u>
Total	96	100	2,736	100	3,260	100	78
<u>Soybeans</u>							
Delta	1,372	91	25,429	94	30,466	94	95
Others	<u>137</u>	<u>9</u>	<u>1,733</u>	<u>6</u>	<u>2,034</u>	<u>6</u>	<u>96</u>
Total	1,509	100	27,162	100	32,500	100	95
<u>Sorghum</u>							
Delta	58	73	1,478	85	3,563	85	43
Others	<u>21</u>	<u>27</u>	<u>260</u>	<u>15</u>	<u>624</u>	<u>15</u>	<u>43</u>
Total	79	100	1,738	100	4,187	100	43
<u>Total</u>							
Delta	2,247	80	54,013	79	53,767	82	72
Others	<u>549</u>	<u>20</u>	<u>14,277</u>	<u>21</u>	<u>11,654</u>	<u>18</u>	<u>37</u>
Total	2,796	100	68,290	100	65,421	100	64

1/ Arkansas, Ashley, Chicot, Clay, Craighead, Crittenden, Cross, Desha, Drew, Greene, Jackson, Jefferson, Lawrence, Lee, Lincoln, Lonoke, Mississippi, Monroe, Phillips, Poinsett, Prairie, Pulaski, St. Francis, Woodruff.

2/ Calculated from 1954 Census of Agriculture, U. S. Bureau of the Census.

Table 8.--Estimated grain production 1952 and 1956 1/ and estimated 1956 1/ for specified counties in Arkansas

Area	Grain production				Estimated sales	
	Change					
	1952 2/ 1,000 bu.	1956 3/ 1,000 bu.	1952 to 1956 1,000 bu.	Percent	1956 4/ 1,000 bu.	Percent of 1956 production
<u>5/</u> <u>Delta counties</u>						
<u>District 3:</u>						
Clay	1,387.3	2,229.8	† 842.5	† 60.7	1,384.5	62.1
Craighead	1,311.0	3,237.6	† 1,926.6	† 147.0	2,273.2	70.2
Greene	1,080.7	1,791.4	† 710.7	† 65.8	865.9	48.3
Jackson	1,055.1	2,250.1	† 1,195.0	† 113.3	1,879.4	83.5
Lawrence	1,096.6	1,515.2	† 418.6	† 38.2	950.1	62.7
Mississippi	4,440.4	6,941.1	† 2,500.7	† 56.3	6,066.5	87.4
Poinsett	1,621.8	3,538.8	† 1,917.0	† 118.2	2,812.1	79.5
Total	11,992.9	21,504.0	† 9,511.1	† 79.3	16,231.7	75.5
<u>District 5:</u>						
Pulaski	356.9	1,001.8	† 644.9	† 180.7	717.3	71.6
<u>District 6:</u>						
Arkansas	1,632.9	5,787.3	† 4,154.4	† 254.4	5,326.2	92.0
Crittenden	1,729.3	3,854.4	† 2,125.1	† 122.9	3,170.9	82.3
Cross	784.9	2,240.0	† 1,455.1	† 185.4	1,698.2	75.8
Lee	764.5	1,829.5	† 1,065.0	† 139.3	1,042.5	57.0
Lonoke	694.2	1,825.5	† 1,131.3	† 163.0	1,294.7	70.9
Monroe	401.1	1,070.2	† 669.1	† 166.8	788.4	73.7
Phillips	1,335.5	2,398.0	† 1,062.5	† 79.6	1,637.1	70.4
Prairie	620.7	2,250.6	† 1,629.9	† 262.6	1,775.8	78.9
St. Francis	843.9	2,161.6	† 1,317.7	† 156.1	1,663.5	77.0
Woodruff	634.5	1,630.2	† 995.7	† 156.9	1,297.1	79.6
Total	9,441.5	25,047.3	† 15,605.8	† 165.3	19,744.4	78.8
<u>District 9:</u>						
Ashley	309.5	844.8	† 535.3	† 173.0	508.0	60.1
Chicot	371.2	1,129.9	† 758.7	† 204.4	692.2	61.3
Desha	782.9	1,355.7	† 572.8	† 73.2	876.5	64.7
Drew	273.4	460.3	† 187.4	† 68.5	275.7	59.8
Jefferson	662.5	1,856.8	† 1,194.3	† 180.3	1,284.1	69.2
Lincoln	390.8	811.6	† 420.8	† 107.7	454.8	56.0
Total	2,790.3	6,459.6	† 3,669.3	† 131.5	4,091.3	63.3
Total 24 Delta counties	24,581.6	54,012.7	† 29,431.1	† 119.7	40,784.7	75.5
Total 51 other counties	7,898.4	14,277.3	† 6,378.9	† 80.3	5,156.3	36.1
Total State	32,480.0	68,290.0	† 35,810.0	† 110.3	45,941.0	67.3
Percent of State for Delta counties	75.7	79.1	88.2	-	88.8	-

1/ Corn, oats, wheat, soybeans for beans, and grain sorghum.

2/ County figures for corn, oats and sorghum estimated from figures shown by 1954 Census of Agriculture; wheat estimated from 1956 figures from Crop Reporting Service, Little Rock, Ark.

3/ County figures for oats based on 1954 Census of Agric.

4/ County figures estimated from sales reported by 1954 Census of Agric.

5/ As defined in Bulletin 583 of Arkansas Agricultural Experiment Station, Fayetteville, Ark., March 1957.

This greatly increased acreage and production of grain in these Delta counties is related to the decline in the cotton and rice acreage. Cotton acreage in the area declined from 1,889,000 acres in 1949 to an estimated 1,011,000 acres in 1957. Rice declined from 600,000 acres in 1954 to 332,500 acres in 1957.

Of the 35.8 million bushel increase in grain production for the entire State between 1952 and 1956, 29.4 million bushels or 81 percent occurred in the Delta counties. In 1956, the five Delta counties of Craighead, Mississippi, Poinsett, Arkansas and Crittenden produced 34 percent of the grain in the State. About two-thirds of the 1956 production went to market for the State as a whole. More than 75 percent of the production in the Delta counties was sold compared to 36 percent for the rest of the State. In other words, the Delta counties produced 79 percent of the 1956 grain but marketed 89 percent of the grain sold in the State (table 3). The proportion of the production sold in 1956 in the Delta counties ranged from 48 percent in Greene to 92 percent in Arkansas county.

Table 9 shows the estimated production in 1956 and 1957 and estimated sales for 1957. Much of the 1957 data in this table are preliminary and subject to revision; however, the relative pattern should remain about the same.

Although the State as a whole showed a decline in production of nearly 2.9 million bushels between 1956 and 1957, the decline in the Delta counties was less than one-fourth million bushels or 0.5 percent compared to an 18.4 percent decline in the other counties. The major decline was in oats. Many of the individual Delta counties showed decreases; however, some of them, particularly in the northeast, showed substantial increases.

Table 9.--Estimated grain production 1956 and 1957 1/ and estimated sales 1957 1/ for specified counties in Arkansas

Area	Grain production					
	Change				Estimated sales	
	1956 2/	1957 3/	1956 to 1957	Percent	1957 4/	Percent of 1957 production
	1,000 bu.	1,000 bu.	1,000 bu.	Percent	1,000 bu.	Percent of 1957 production
<u>5/</u> <u>Delta counties</u>						
<u>District 3:</u>						
Clay	2,229.8	2,228.8	- 1.0	-	1,565.1	70.2
Craighead	3,237.6	3,580.0	+ 344.4	+ 10.6	2,787.5	77.8
Greene	1,791.4	1,711.9	- 79.5	- 4.4	1,036.2	60.5
Jackson	2,250.1	2,524.4	+ 274.3	+ 12.2	2,226.0	88.2
Lawrence	1,515.2	1,598.5	+ 83.3	+ 5.5	1,104.3	69.1
Mississippi	6,941.1	8,345.9	+1,404.8	+ 20.2	7,541.6	90.4
Poinsett	3,538.8	3,479.0	- 59.8	- 1.7	2,931.5	84.3
Total	21,504.0	23,470.5	+1,966.5	+ 9.1	19,192.7	81.8
<u>District 5:</u>						
Pulaski	1,001.8	859.3	- 142.5	- 14.2	624.8	72.7
<u>District 6:</u>						
Arkansas	5,787.3	4,953.6	- 833.7	- 14.4	4,591.7	92.7
Crittenden	3,854.4	4,012.1	+ 157.7	+ 4.1	3,403.0	84.9
Cross	2,240.0	2,462.9	+ 222.9	+ 10.0	1,885.9	76.6
Lee	1,829.5	1,997.8	+ 168.3	+ 9.2	1,375.1	68.8
Lonoke	1,825.5	1,545.0	- 280.5	- 15.4	1,162.4	75.2
Monroe	1,070.2	947.6	- 122.6	- 11.5	755.3	79.8
Phillips	2,398.0	2,264.0	- 134.0	- 5.6	1,732.1	76.5
Prairie	2,250.6	1,774.0	- 476.6	- 21.2	1,453.5	81.9
St. Francis	2,161.6	2,234.3	+ 73.2	+ 3.4	1,750.5	78.3
Woodruff	1,630.2	1,625.6	- 4.6	- .3	1,360.3	83.7
Total	25,047.3	23,817.4	-1,229.9	- 4.9	19,475.8	81.8
<u>District 9:</u>						
Ashley	844.3	858.6	+ 13.3	+ 1.6	588.3	68.5
Chicot	1,129.9	979.1	- 150.8	- 13.3	670.4	68.5
Desha	1,355.7	1,092.7	- 263.0	- 19.4	727.3	66.6
Drew	460.3	418.9	- 41.9	- 9.1	264.3	63.1
Jefferson	1,856.8	1,527.6	- 329.2	- 17.7	1,121.9	73.4
Lincoln	811.6	742.3	- 69.3	- 8.5	482.6	65.0
Total	6,459.6	5,619.2	- 840.4	- 13.0	3,355.3	68.6
Total 24 Delta counties	54,012.7	53,766.4	- 246.3	- .5	43,148.6	80.3
Total 51 other counties	14,277.3	11,654.6	-2,622.7	- 18.4	4,516.1	38.7
Total State	68,290.0	65,421.0	-2,869.0	- 4.2	47,664.7	72.9
Percent of State for Delta counties	79.1	82.2	-	-	90.5	-

1/ Corn, oats, wheat, soybeans for beans, and grain sorghum.

2/ County figures for corn, oats, and sorghum estimated from figures shown by 1954 Census of Agriculture; wheat estimated from 1956 figures from Crop Reporting Service, Little Rock, Ark.

3/ County figures for oats based on 1954 Census of Agric.

4/ County figures estimated from sales reported by 1954 Census of Agriculture.

5/ As defined in Bulletin 583 of Arkansas Agricultural Experiment Station, Fayetteville, Ark., March 1957.

In 1957, the Delta counties sold more than 30 percent of the grain they produced compared to less than 40 percent for the remaining counties.

It is estimated that in 1957 the five counties of Craighead, Mississippi, Poinsett, Arkansas and Crittenden produced more than 37 percent of the grain in the State and marketed more than 41 percent of the grain that left the farm.

Off-Farm Commercial Grain Storage Facilities

A late 1957 survey by the State and County A.S.C. Committees showed estimated off-farm commercial grain storage facilities in Arkansas with a capacity of 43,091,000 bushels. It is estimated that 96 percent or more than 46 million bushels of this capacity is located in these 24 Delta counties.

The A.S.C. figures include rice storage capacity which is estimated at 31 million bushels. Practically all of this capacity would be in the Delta counties which would leave around 15 million bushels of storage for the grain crops, including soybeans. In other words, it is estimated there was one bushel of storage capacity for each 2.9 bushels of grain leaving the farm in 1957 for the Delta counties. In Illinois, there is about one bushel of storage for each two bushels of grain sold off the farm. Some of the rice storage facilities are used for grain. How much of this takes place is not known.

Only three cooperative or farmer owned grain elevator facilities are known to be operating in the Delta. They have a combined capacity of around 650,000 bushels. In addition, a couple of the cooperative oil mills have storage for around 2 million bushels soybeans.

There is a modern terminal at Helena and another was being discussed for Osceola. Of course, there are modern terminal facilities in Memphis, Tenn.

Prices for Selected Grains

Much of the grain for sale moves to market at harvest and usually results in depressed prices partly because there is not enough storage. For example, the average midmonth prices received by farmers for corn for the 7 crop years, 1950-56, ranged from a low of \$1.30 a bushel in November to \$1.54 in July--a gain of 10 cents a bushel (table 10). For the same period, soybean prices moved from a low of \$2.27 a bushel in October to \$2.00 in May--an increase of 61 cents a bushel (table 10 and figure 5). Wheat and oats showed gains of 10 cents a bushel (table 11 and figure 5). Since these are Statewide figures, prices received probably vary considerably between areas.

Field Survey Results

The field survey was confined to the 24 Delta counties in east Arkansas. It was conducted in the south half in August 1957 and in the north half in March 1958. Most of the county agents and the few cooperative people were contacted.

Production

These people were of the opinion that grain production was in the area to stay but that cotton and rice allotments will continue to be planted for the most part. This is particularly true for rice. Most of them thought that grain production would increase. Some of the important factors in their opinion are:

Table 10.--Average midmonth prices received for corn and soybeans by farmers in Arkansas, 1950-51 to 1956-57

Grain and year	Oct. 15	Nov. 15	Dec. 15	Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15	June 15	July 15	Aug. 15	Sept. 15
<u>Dollars per bushel</u>												
<u>Corn</u>												
1950-51	1.32	1.27	1.33	1.33	1.46	1.52	1.55	1.60	1.58	1.58	1.57	1.56
1951-52	1.51	1.55	1.66	1.76	1.82	1.85	1.87	1.85	1.85	1.93	1.91	1.85
1952-53	1.74	1.69	1.72	1.75	1.76	1.76	1.78	1.76	1.69	1.71	1.62	1.57
1953-54	1.47	1.44	1.47	1.49	1.49	1.49	1.52	1.50	1.52	1.50	1.51	1.50
1954-55	1.50	1.43	1.50	1.43	1.43	1.50	1.50	1.50	1.49	1.47	1.42	1.20
1955-56	1.13	1.07	1.06	1.06	1.03	1.12	1.16	1.20	1.23	1.24	1.27	1.20
1956-57	1.16	1.17	1.20	1.24	1.26	1.30	1.32	1.32	1.32	1.34	1.31	1.25
7 yr. av.												
1950-56	1.40	1.33	1.42	1.45	1.43	1.51	1.53	1.53	1.53	1.54	1.52	1.45
<u>Soybeans</u>												
1950-51	1.92	2.34	2.41	2.65	2.35	2.33	3.03	3.10	2.95	2.70	2.50	2.42
1951-52	2.52	2.70	2.71	2.63	2.65	2.64	2.80	2.85	2.90	2.75	2.80	2.80
1952-53	2.70	2.56	2.64	2.61	2.53	2.81	2.75	2.85	2.80	2.60	2.41	2.23
1953-54	2.31	2.42	2.55	2.63	2.33	3.15	3.40	3.45	3.30	3.25	2.80	2.50
1954-55	2.40	2.45	2.53	2.53	2.59	2.67	2.80	2.70	2.60	2.30	2.25	1.96
1955-56	2.00	1.92	1.93	2.00	2.13	2.24	2.42	2.35	2.71	2.41	2.27	2.03
1956-57	2.02	2.19	2.25	2.23	2.34	2.31	2.35	2.35	2.35	2.35	2.25	2.15
7 yr. av.												
1950-56	2.27	2.37	2.43	2.50	2.56	2.63	2.79	2.83	2.80	2.62	2.47	2.31

Source: Agricultural Prices, Crop Reporting Board, U. S. Department of Agriculture.

Figure 5.--Average mid-month prices received for specified grain by farmers in Arkansas, 7-year average, 1950-51 to 1956-57

Dollars
per
bushel

1.65
1.55

1.55

1.45

1.35

Corn

3.00

Soybeans

2.80

2.60

2.40

2.20

Oct. 15 Nov. 15 Dec. 15 Jan. 15 Feb. 15 Mar. 15 Apr. 15 May 15 June 15 July 15 Aug. 15 Sept. 15

2.20

Wheat

2.10

2.00

1.90

1.80

1.10

Oats

1.00

.90

.80

.70

June 15 July 15 Aug. 15 Sept. 15 Oct. 15 Nov. 15 Dec. 15 Jan. 15 Feb. 15 Mar. 15 Apr. 15 May 15

Table 11.--Average mid-month prices received for wheat and oats by farmers in Arkansas, 1950-51 to 1956-57

Grain and year	June 15	July 15	Aug. 15	Sept. 15	Oct. 15	Nov. 15	Dec. 15	Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15
<u>Dollars per bushel</u>												
<u>Wheat</u>												
1950-51	1.92	1.97	1.97	1.96	1.94	2.01	2.03	2.13	2.20	2.10	2.13	2.05
1951-52	2.10	2.07	2.03	2.08	2.11	2.20	2.19	2.25	2.22	2.22	2.20	2.13
1952-53	2.02	2.02	2.09	2.13	2.15	2.15	2.14	2.11	2.11	2.15	2.12	2.01
1953-54	1.84	1.84	1.83	2.00	2.00	2.05	2.00	2.06	2.04	2.04	2.04	2.04
1954-55	1.84	.187	1.93	1.93	1.95	1.99	2.06	2.01	2.06	2.06	2.00	1.95
1955-56	1.85	1.82	1.82	1.82	1.95	1.91	1.95	1.90	1.86	1.86	1.89	1.93
1956-57	1.87	1.85	1.86	1.92	1.99	2.03	2.08	2.08	2.05	2.01	2.03	1.90
7 yr. av.												1.93
1950-56	1.92	1.92	1.93	1.98	2.01	2.05	2.06	2.08	2.08	2.06	2.06	2.00
<u>Oats</u>												
1950-51	.93	.90	.90	.96	.96	.99	.99	1.00	1.05	1.10	1.06	1.07
1951-52	1.05	1.01	1.00	1.03	1.05	1.07	1.05	1.10	1.10	1.12	1.12	1.10
1952-53	.97	.93	1.02	1.08	1.12	1.10	1.08	1.08	1.12	1.09	1.02	.99
1953-54	.77	.80	.85	.92	.92	.92	.93	.93	.94	.94	.90	.88
1954-55	.69	.68	.76	.82	.90	.93	.91	.91	.92	.92	.88	.83
1955-56	.68	.66	.69	.70	.76	.75	.70	.70	.70	.73	.72	.70
1956-57	.60	.62	.66	.72	.73	.78	.80	.82	.83	.82	.81	.80
7 yr. av.												
1950-56	.81	.80	.84	.89	.92	.93	.92	.93	.96	.96	.93	.91

Source: Agricultural Prices, Crop Reporting Board, U. A. Dept. of Agric.

1. Acreage controls on cotton and rice will likely be continued.
2. A considerable percentage of the labor supply, used primarily in connection with cotton, has left the farm.
3. Most of the farms now have the equipment necessary to produce and harvest their grain.
4. Sorghum production will increase when adapted, open-headed, hybrid varieties are developed.
5. Soybeans will continue to be the most important cash grain crop.
6. Per acre yields will continue to increase as improved cultural practices are discovered and as producers learn to use them.
7. Irrigation of grain crops will increase as rice acreage may be reduced and as new wells and other sources of irrigation water are developed. An important factor here is that the water necessary to irrigate an acre of rice will normally irrigate 4 to 6 acres of grain.
8. Double cropping will increase such as small grains following soybeans and sorghum and vice versa. Irrigation can play an important part by getting the new crops off to a fast start after harvest of the prior crop. With proper fertilization, such a practice can be continued almost indefinitely.
9. Wheat production will fluctuate but will probably show an upward trend as long as the 15 acre exemption remains in effect.

Marketing

With the increase in grain production, marketing problems have arisen. Much of the grain leaves the farm at harvest. This may be due, in part, to the fact that the grain producers also produce rice and

cotton where the custom has been to market the crops as harvested.

Improved harvesting equipment and better roads permit large amounts of grain to reach the market in a shorter period of time and usually result in depressed prices to growers. For example, corn sold for as little as 90 cents a bushel in the fall of 1957 and sorghums were as low as \$1.40 per hundredweight in this area.

Rail transportation south from the area appeared fairly adequate. Except from Memphis to Little Rock, rail facilities from east to west in the area are limited. A lot of grain moves by truck but the lack of roads and bridges hampers this movement, particularly in the southern half of the area. Lack of adequate transportation and high rates prevent the grain growers in the Delta from tapping the huge broiler feed industry in northwest Arkansas. The same is pretty much true with respect to the broiler areas in Mississippi and Alabama.

A lot of the grain moves to Memphis by truck. Quite a portion is shipped by rail to New Orleans for export. Some goes to the various oil mills.

A number of cotton gins in the area, particularly the northern half, have a few bins with unloading and shipping facilities. They deal primarily in soybeans which they purchase from farmers and ship out by truck as they accumulate trailer truck loads.

There were indications that not enough buyers were in the area at harvest and there was little incentive for paying competitive prices or buying on grade. The establishment of the two terminal river houses at Helena and Osceola, if constructed, could help the situation some.

Storage

Except for rice, storage and handling facilities for grain in the area are limited. There is some farm storage but the quality varies widely. In some areas, farm storage is not recommended at all. In others, adequate facilities equipped with aeration systems are in use. Most people indicated, however, that the farmers would prefer to sell or store in an elevator as they harvest.

It is estimated that more than two-thirds of the commercial storage in the area is for rice, some of which is used for grain. This practice is discouraged by the rice mills because of the contamination problem.

Of the estimated 15 million bushels of commercial grain storage in the area, about 2.7 million bushels is cooperative or farmer owned. A lot of the storage is at oil mills which are used to hold stocks for crushing purposes.

Practically none of the commercial storage is available to the farmer for storing his grain which has the effect of making grain price support programs largely ineffective. For example, the total off-farm stocks of grain in Arkansas at April 1, 1958, were 3,476,000 bushels of which C.C.C. owned 2,741,000 bushels. An additional 4.6 million bushels were stored on farms.

Additional Cooperative Facilities

Many comments were made to the effect that the grain farmers should own their own facilities if they want to realize the greatest benefits from growing grain. Some of the county agents mentioned the job that the rice cooperatives had done. Some of them were aware that the Arkansas

Rice Growers Cooperative Association was considering a grain marketing program and they thought it was a step that should be taken. A few expressed the opinion that a river terminal backed up by smaller local facilities, would be necessary to carry on an effective merchandising program.

